

FIG. 1 PRIOR ART

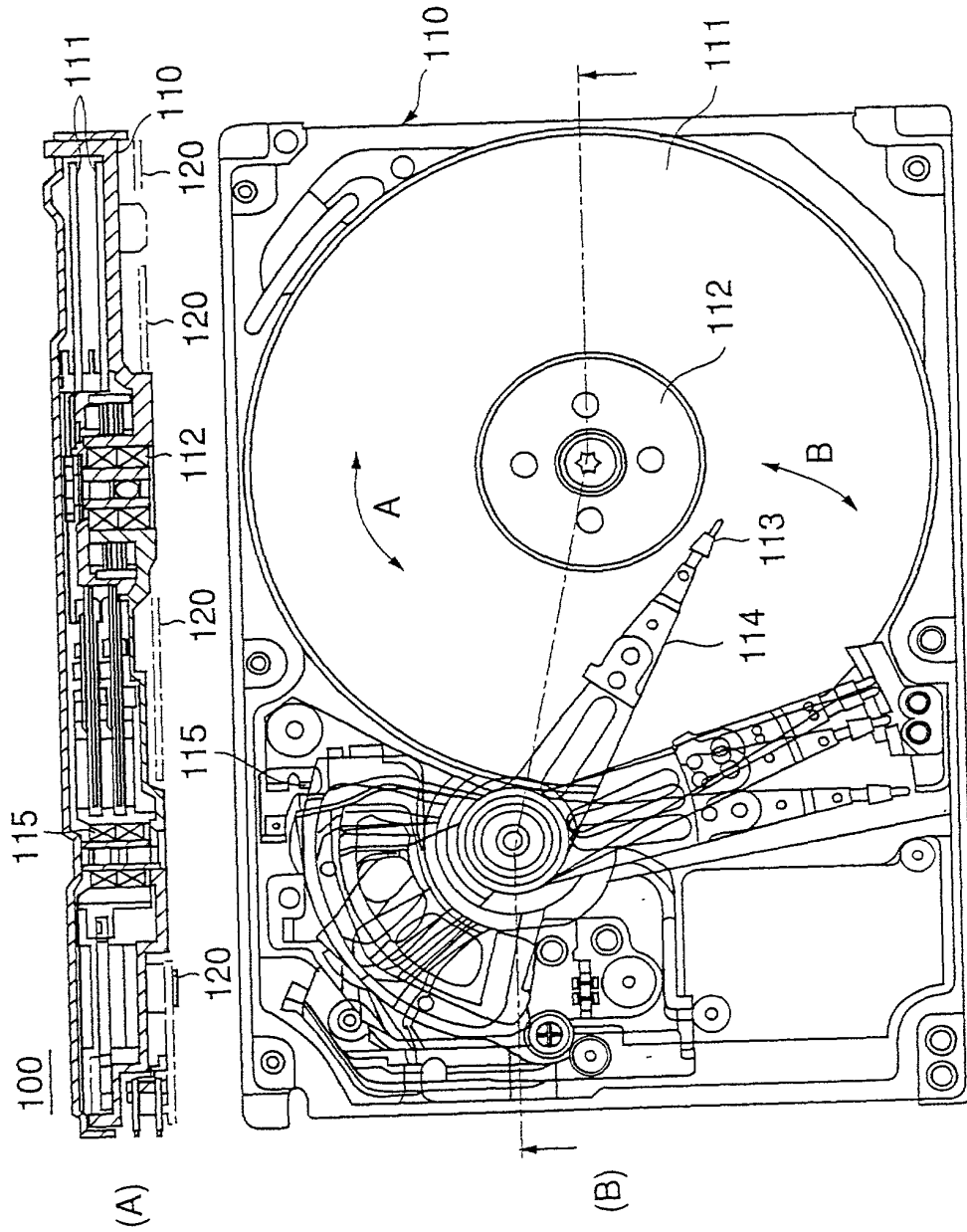


FIG. 2 PRIOR ART

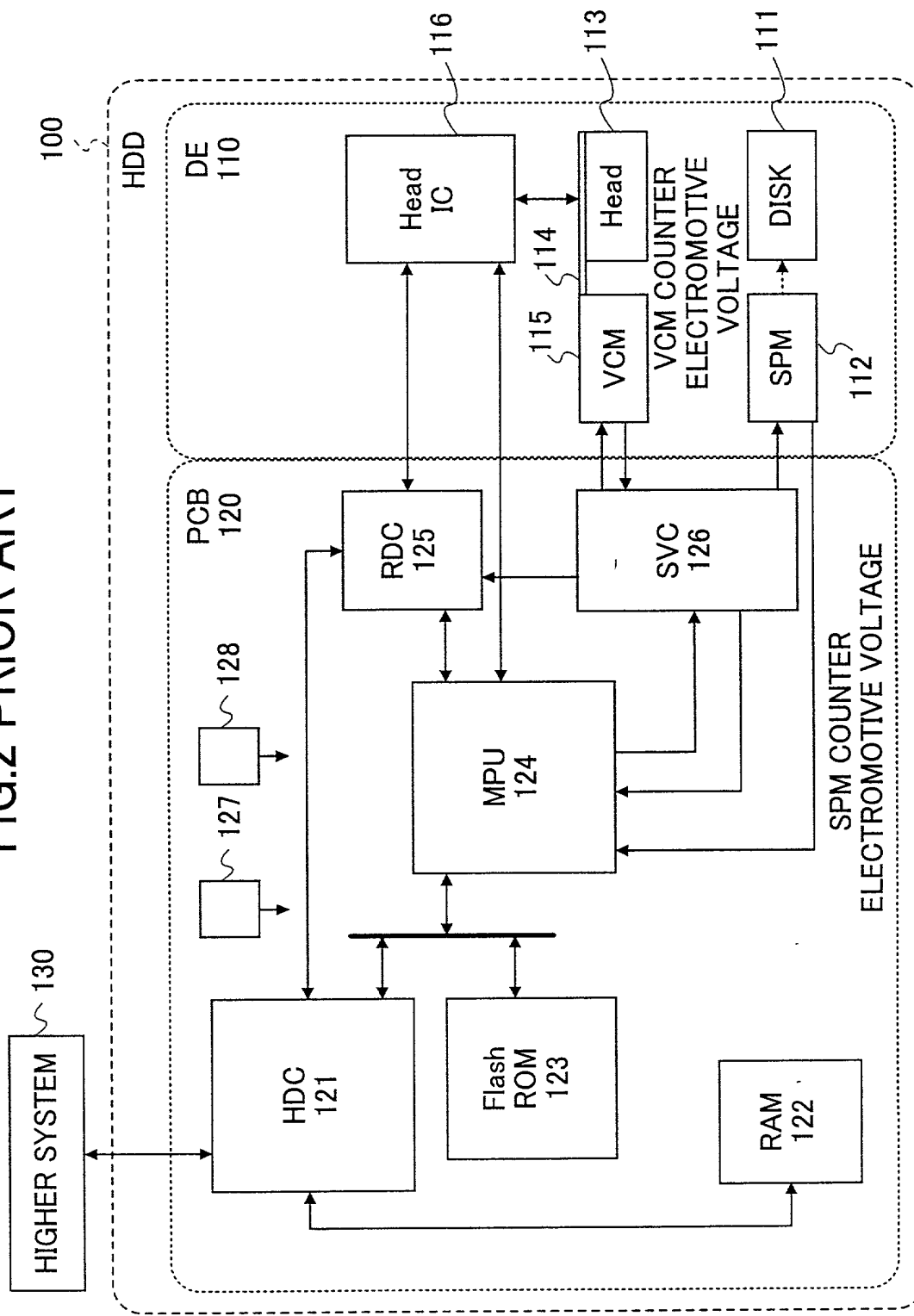


FIG. 3 PRIOR ART

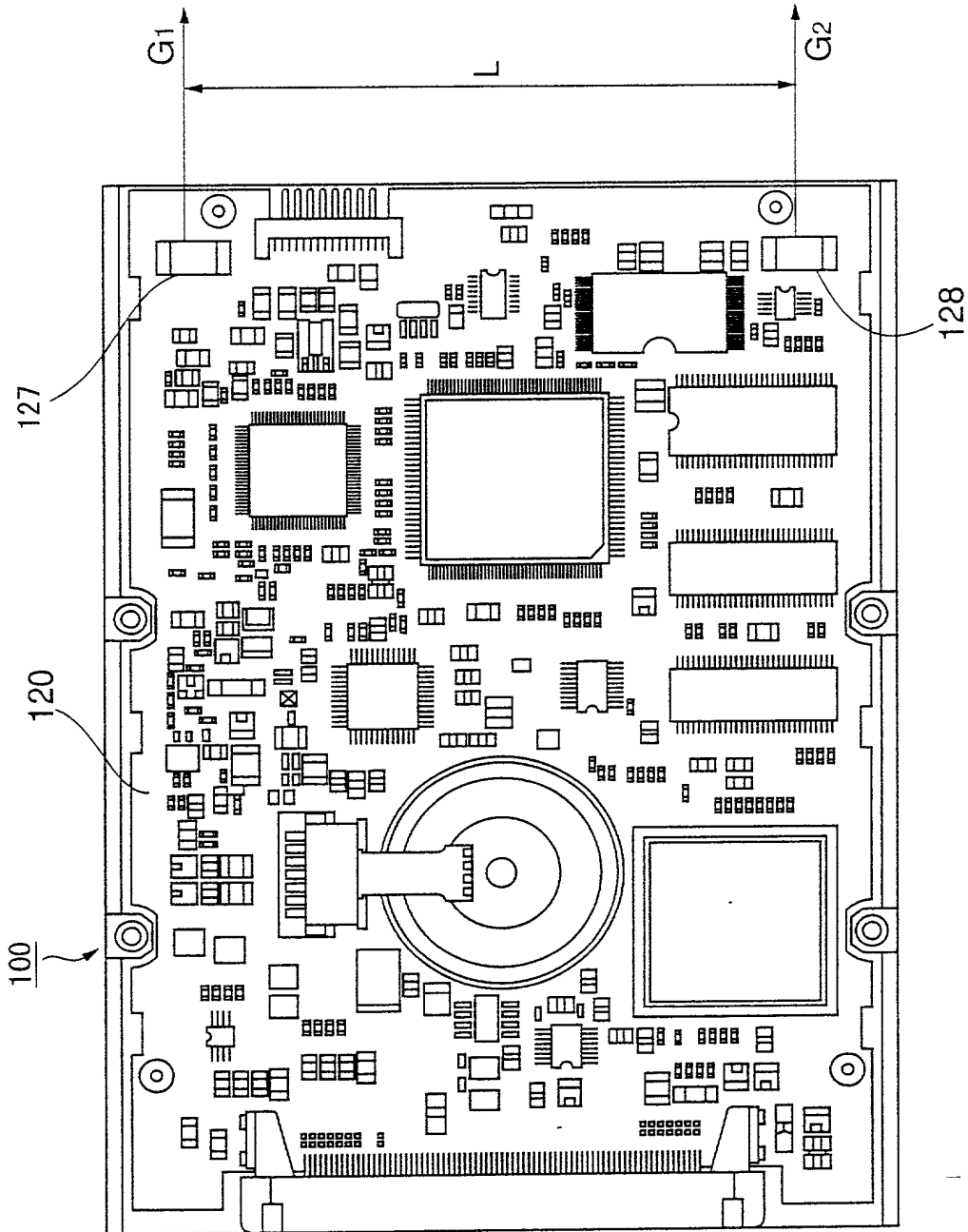
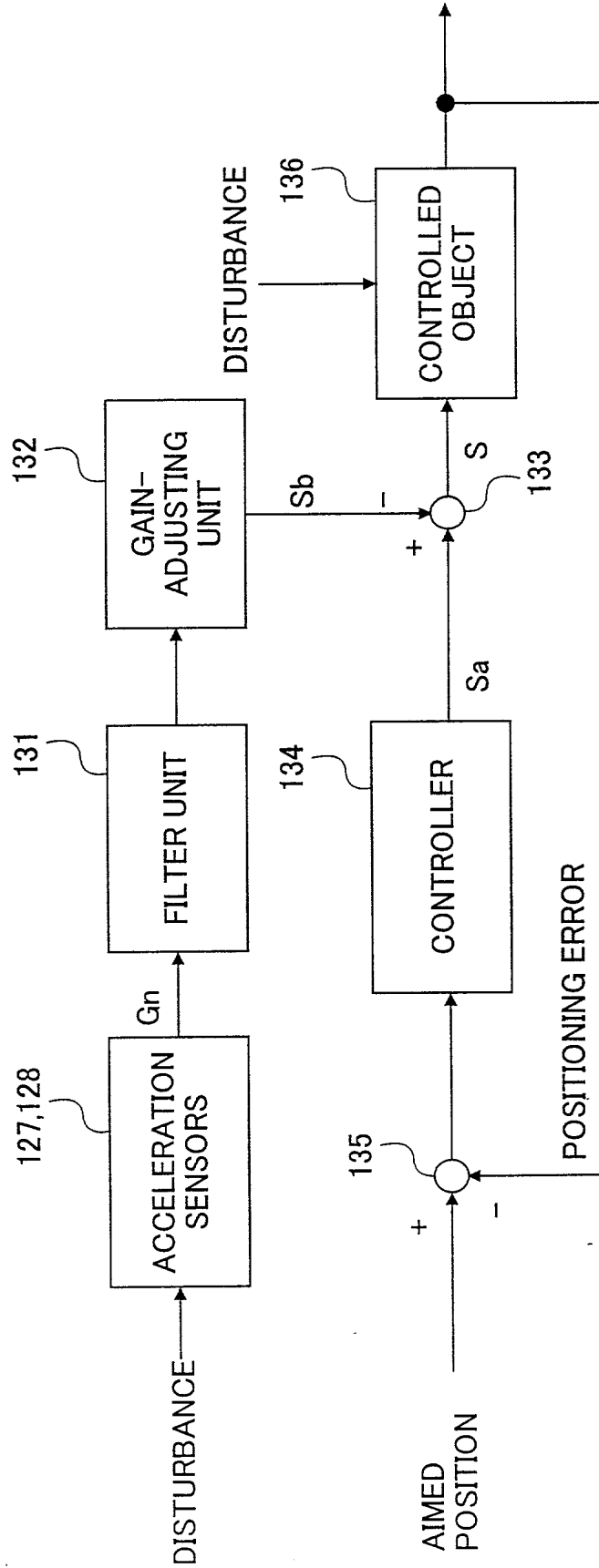


FIG.4 PRIOR ART



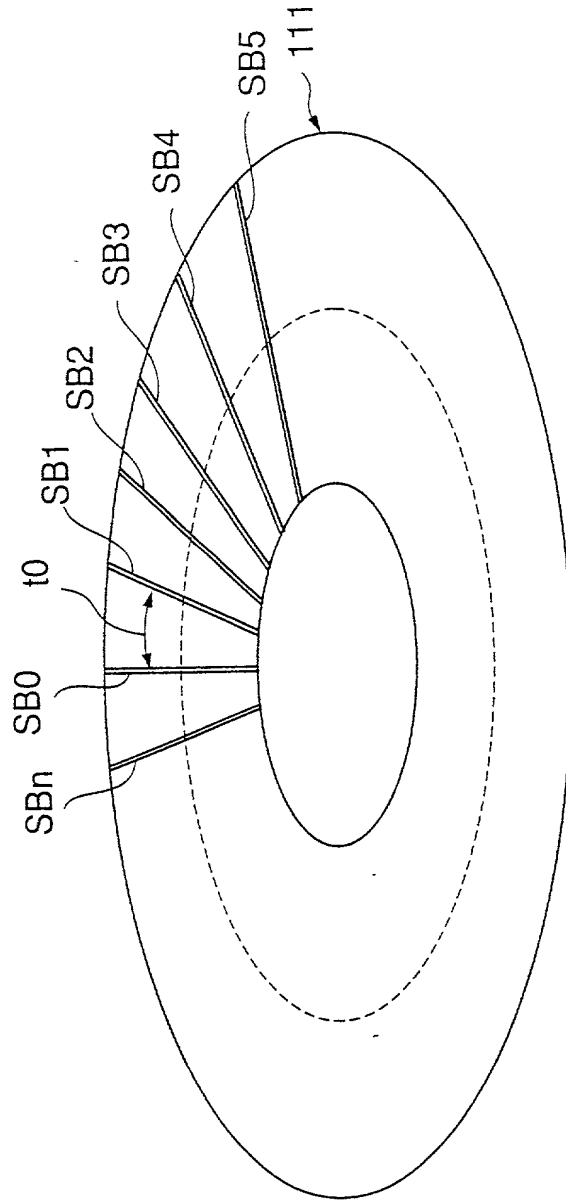


FIG. 5A

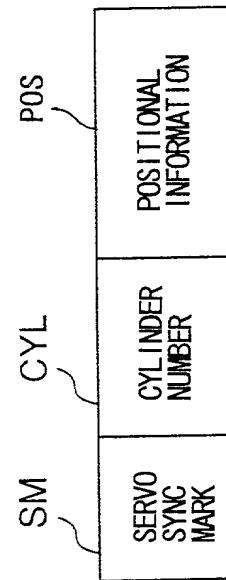


FIG. 5B

FIG.6

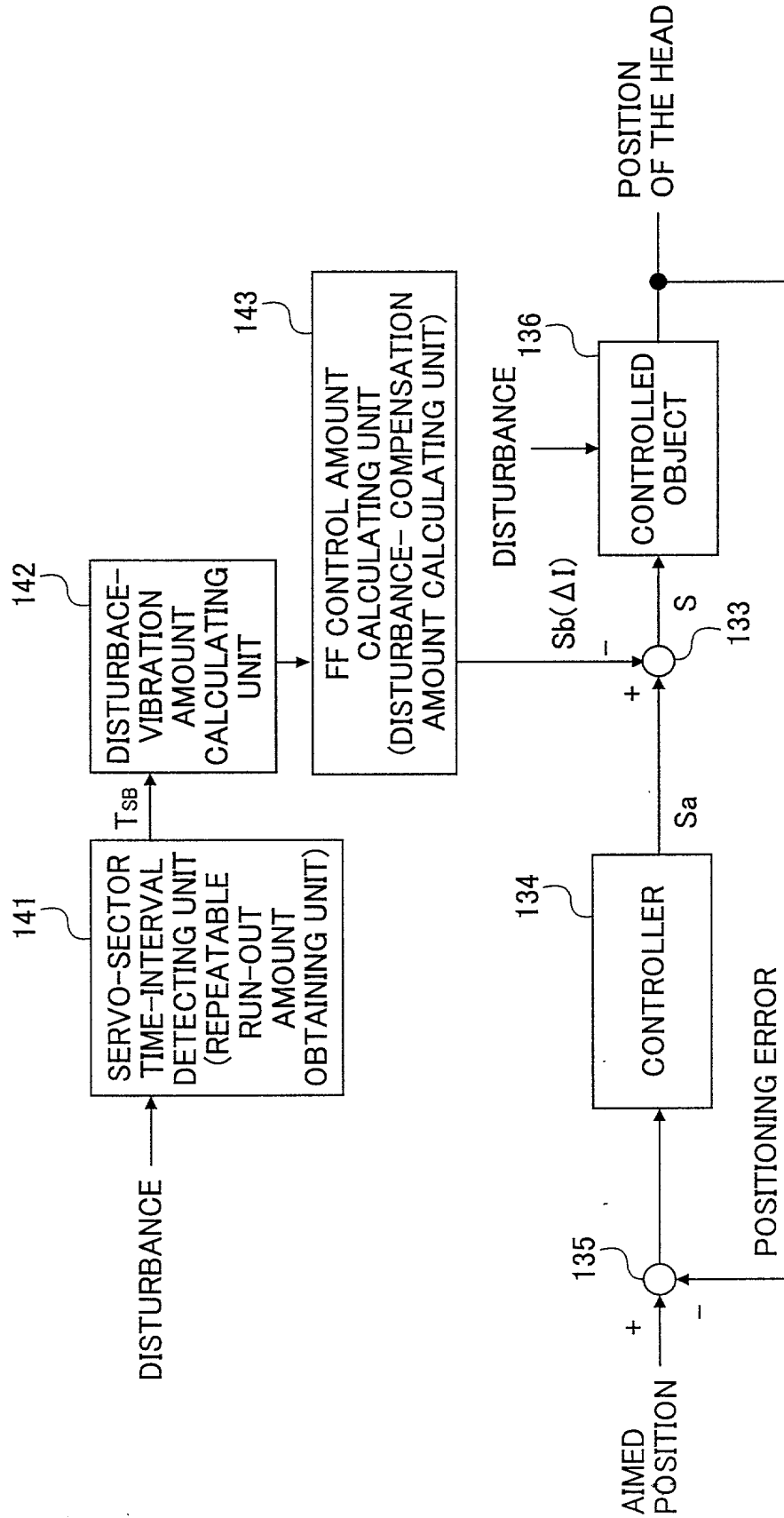


FIG.7

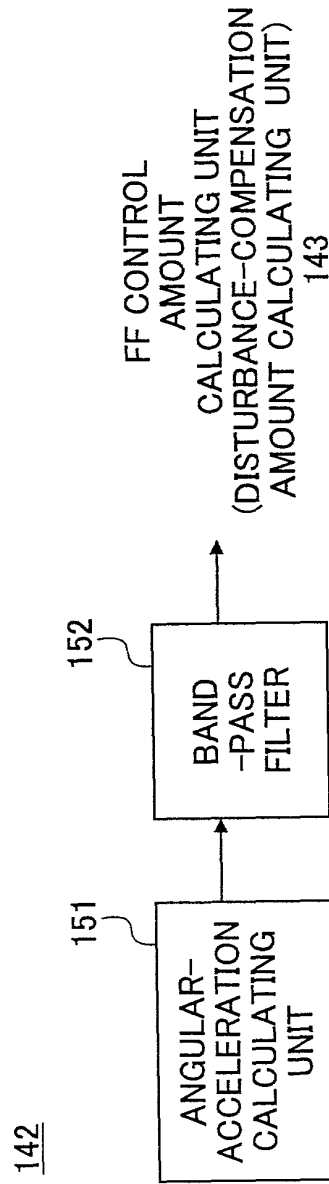


FIG.8

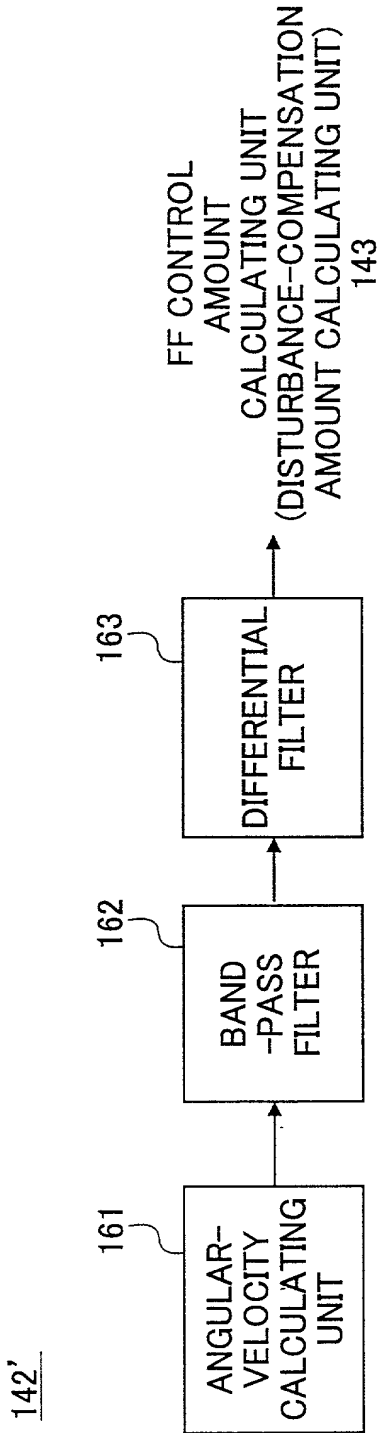




FIG.9

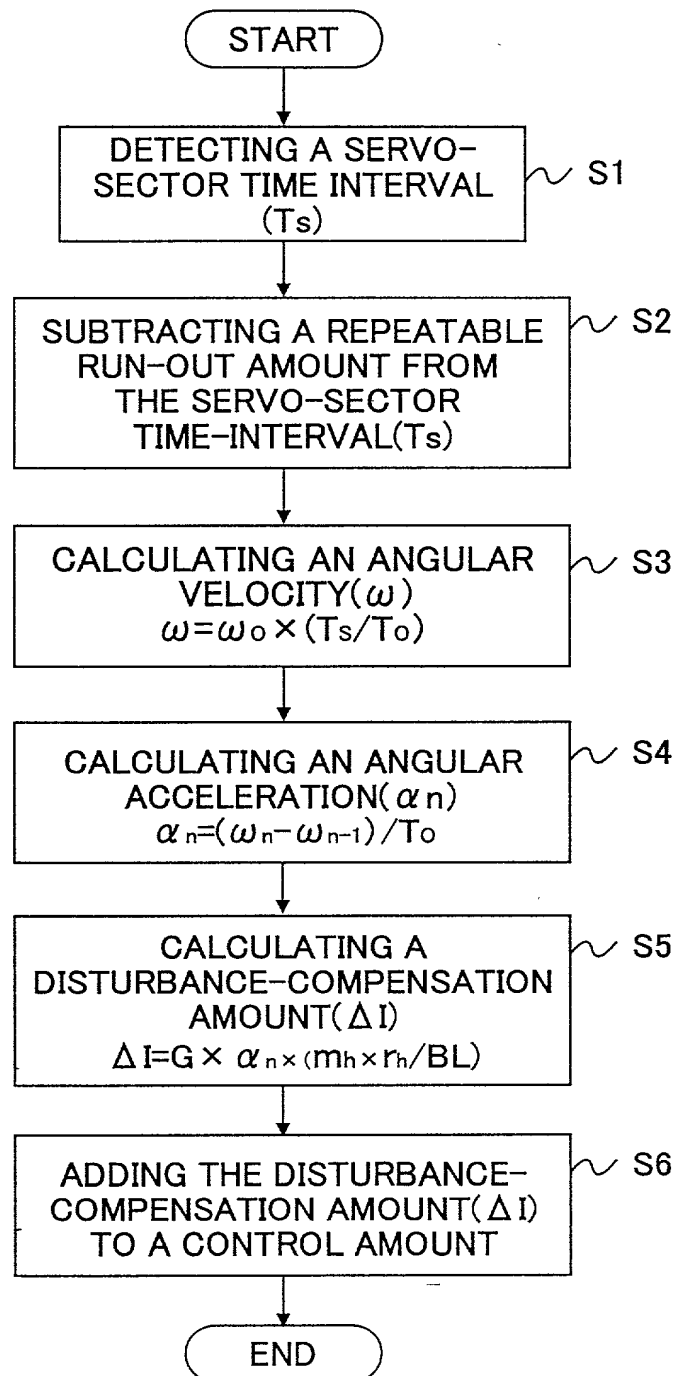


FIG. 10A

FLUCTUATIONS OF  
A SERVO-SECTOR  
INTERVAL TIME  
(51.2ns/div)

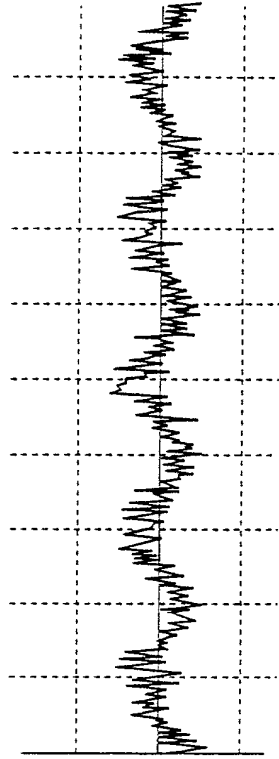
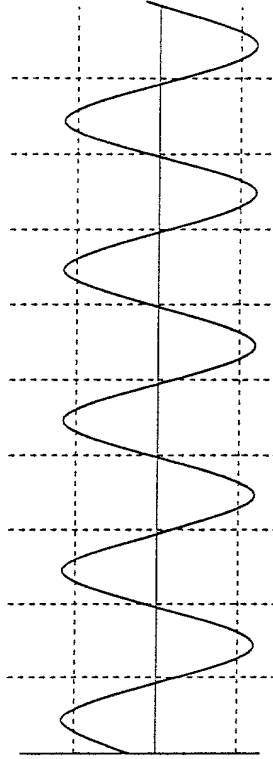


FIG. 10B

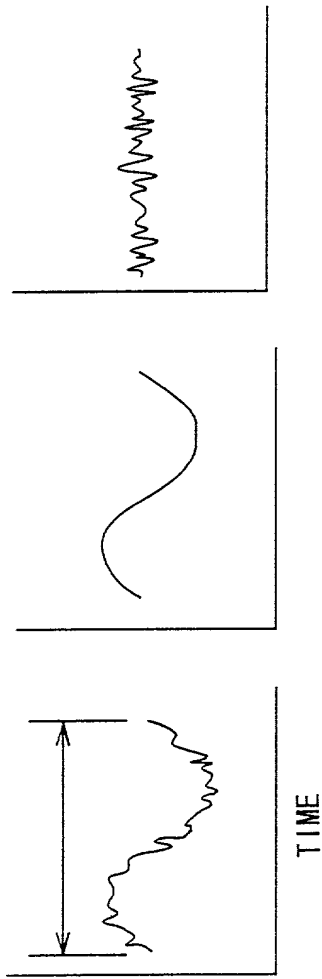
ROTARY  
EXCITATION  
(50rad/s<sup>2</sup>/div)



Time (5ms/div)

FIG. 11A      FIG. 11B      FIG. 11C

ONE ROTATION OF  
A SPINDLE



FLUCTUATIONS  
OF ROTATION